

Biomass and Carbon Estimation

Biomass equations can work very similar to volume equations. Usually in biomass equations, we want to know about other parts of the tree than just the stem. Carbon equations usually simple estimate the carbon content of the biomass. Biomass equations are better for the commercial parts of a tree, as people have put more effort in to estimating these parts.

The above ground stem is about half of the tree's biomass and the part of the tree that has been the most studied. Other parts include the top of the stem and branches, leaves, bark and roots. These parts are studied less for two reasons; these parts have less commercial value and they are much harder to collect. Often people estimating these parts of the tree are satisfied with a regional average by species.

Currently two main approaches exist to estimating whole tree biomass. First is to use commercial stem volume estimates and then through average ratios by species the likely biomass associated with that volume. The second approach is to predict biomass from an inventory of trees diameters and species. More detailed biomass equations exist but are not in wide spread use at this time.

Also See:

Chapter 10 in:

Husch, B., T. W. Beers and J. A. Kershaw. 2003. Forest Mensuration. Fourth Edition. John Wiley and Son 443 p.

